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Message in a Bottleneck: The Need for FCC-Mandated Interoperability Among Instant Messaging Providers

Matthew A. Goldberg

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I. INTRODUCTION

Instant messaging (IM) is one of the Internet's most popular technologies and a major worldwide communications tool with the potential to serve as a catalyst for a new generation of Internet applications based on real-time computing. The potential of IM is being undermined, however, by the closed, proprietary nature of the most popular IM systems. In contrast to Internet technologies like the World Wide Web (Web) and e-mail, the technical underpinnings of these IM systems are not open or publicly available. As a result, users of one IM system cannot easily communicate with the users of a competing IM system. In addition to the inconvenience this causes an increasingly IM-dependent society, the lack of compatibility among IM systems has had a negative impact on the pace of innovation within the IM market.

Against this backdrop, and as part of the 2001 merger of AOL and Time Warner, the Federal Communications Commission (FCC) boldly turned its back on tradition and decided to regulate IM—the first time the FCC had ever regulated a software application native to the Internet. Then, in August 2003, the FCC removed the restriction it had placed on AOL,[1] leaving the IM market totally unregulated.

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1. In October 2003, AOL Time Warner, Inc. officially changed its name to Time Warner, Inc. *See AOL Time Warner Is Now Time Warner* (Oct. 16, 2003)(explaining the reasons for the name change), *at* http://money.cnn.com/2003/10/16/technology/timewarner_name. This Comment will hereinafter refer to the IM business of Time Warner as "AOL," which is consistent with the language in the various FCC documents and

This Comment argues that the FCC was correct in its original decision to impose the restriction on AOL, and incorrect in its more recent decision to remove the restriction. Moreover, this Comment argues that the current state of the IM market warrants that the FCC go beyond the scope of its original regulation of AOL, and mandate industry-wide interoperability among all IM providers.

The plan of this Comment is as follows: Part II provides a short overview of the essential differences between the closed-access nature of the leading IM services and the open-access paradigms of such technologies as e-mail and the Web. Part III discusses the FCC's decision to regulate IM in connection with the merger of AOL and Time Warner in 2001, based on the belief that interoperability among IM providers was in the public interest and would spur innovation. Part IV confronts head-on the FCC's removal of the restriction it had placed on AOL, arguing that the decision to do so was incorrect and based on a flawed rationale not in keeping with the pro-interoperability and pro-competition stance of the original FCC Order imposing the restriction. Finally, Part V argues that the FCC should mandate interoperability among all IM providers.

II. INSTANT MESSAGING, THE INNOVATION COMMONS, AND NETWORK EFFECTS

Recent estimates place the world's IM population in excess of 275 million users.[2] For some users, "IM may partially substitute for, as well as heavily supplement, email usage and even the telephone."[3] The presence-detection functionality of IM distinguishes it from all other forms of communication, including the telephone and e-mail.[4] IM users

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supporting material referred to in the discussion that follows. It is also consistent with the fact that AOL remains the company within the larger Time Warner corporate family responsible for operating the IM business. The name "AOL Time Warner" is reserved for references to the 2001 merger between the two companies, which provided the occasion for the FCC's initial regulation of IM. "AOL" is also used to describe the pre-merger Internet company of that name, whose alleged dominance of the IM market in the pre-merger period is what originally drew the attention of government regulators.

2. Daniel Nasaw, *Instant Messaging Firms Back Different Standards*, WALL ST. J. ONLINE, July 15, 2003, *at* http://online.wsj.com (registration required) (copy on file with author).

3. Philip J. Weiser, *Internet Governance, Standard-Setting and Self-Regulation*, 28 N. KY. L. REV. 822, 843 (2001) [hereinafter Weiser, *Internet Governance*].

4. Presence detection is a function of an IM provider's Names and Presence Database, or NPD, which allows users to be informed by their provider whether "a certain user is online and therefore available to engage in instant messaging." *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and*

can tell whether other users are online and if so, whether they wish to be contacted. Because of its presence-detection functionality and its global reach, IM has the potential to become a critical platform for a wide range of real-time computing applications, including gaming, shopping, information-sharing, and business-related applications.[5]

IM's progression toward realizing this potential has been slower than many industry watchers had predicted. This delayed progress can be attributed in large part to the fact that unlike the Web and e-mail, IM is a platform based on closed, proprietary standards, which limit both the usefulness of the technology for consumers and the ability of companies, other than the few dominant players, to enter the market and offer innovative IM-based products and services. An individual computer user can exchange e-mail with any other user, regardless of what e-mail software programs they use and from which companies they purchase Internet access.[6] The public interest benefit lies in the ability of people and businesses to communicate freely with each other "without bottleneck controls on the free flow of information."[7] This type of interoperability is also prevalent among telephone companies; significantly, though, the telephone initially was very much a closed, proprietary system that only achieved interoperability through regulation.[8]

America Online, Inc., Transferors, to AOL Time Warner, Inc., Transferee, FCC CS Docket No. 00-30, 16 F.C.C.R. 6547, ¶ 138 (2001) (Memorandum Opinion and Order) [hereinafter Merger Order]. Because most Internet Service Providers assign Internet protocol (IP) addresses on a dynamic basis to users each time they access the Internet "instant messaging could not work without the NPD, because an instant messaging subscriber could have a different IP address each time he or she signed on to the service. The NPD solves this problem by keeping track of each subscriber's real-time IP address." James B. Speta, *A Common Carrier Approach to Internet Interconnection*, 54 FED. COMM. L.J. 225, 236 (2002).

5. *See* Merger Order, *supra* note 4, ¶¶ 140-41 (discussing possible applications that could be built on an IM platform); Weiser, *Internet Governance*, *supra* note 3, at 833-34 (noting that the Internet tends to evolve in such a way that "certain of today's proprietary applications may emerge as tomorrow's information platforms," and that "some software programs . . . (such as instant messaging services) may initially be a stand-alone application, but will become an information platform that supports other applications"); Speta, *supra* note 4, at 278 (noting IM's "potential to be the [Internet] addressing service operating at the same level as IP, and facilitating many services on top of it. . . . IM has already transcended text to include voice connections, file swapping, and rudimentary multimedia services.").

6. *See* Nasaw, *supra* note 2 (noting that once the Simple Mail Transfer Protocol (SMTP) came into "universal use" in the mid 1990s, "different vendor's e-mail servers [could] communicate with each other"); *see also* Weiser, *Internet Governance*, *supra* note 3, at 831 (stating that e-mail is based on an "open, interoperable protocol that enables all users of the service to reach one another").

7. *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time*

Similarly, any company that wishes to can develop new applications for the Web confident that any Web user who so chooses can use these applications. This freedom to innovate is a function of the Web's open programming standards, access to which is freely available.[9] The "innovation commons" growing out of these open standards is in large part responsible for the enormous growth of the Internet in the past decade and the emergence of the so-called New Economy.[10]

The market for IM is different, however, because the IM services of the major providers—AOL, Microsoft, and Yahoo!—are based on distinct proprietary standards, which are not available to the public. IM provides neither a fully interoperable communications network to consumers (harming the public interest by forcing consumers to adopt inefficient communications practices), nor an innovation commons (harming the public interest by effectively keeping potential entrants out of the market, which limits the evolution of an important Internet platform).[11] In this context, interoperability means the ability of a user of one IM provider to detect the presence of, and communicate with, the users of another IM providers.[12] Technically, interoperability involves

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Warner, Inc., Transferee; Petition of AOL Time Warner, Inc. for Relief From the Condition Restricting Streaming Video AIHS, FCC CS Docket No. 00-30, 18 F.C.C.R. 16835, 16845 (2003) (Memorandum and Order) [hereinafter Removal Order] (dissenting statement of Michael J. Copps and Jonathon S. Adelstein, Commissioners, FCC).

8. Speta, *supra* note 4, at 263 (noting that one of the "principal complaints" ultimately leading to the passage of the 1934 Communications Act was the Bell System's "refus[al] to interconnect . . . with unaffiliated local telephone companies"). Lawrence Lessig has noted how "the early history of telecommunications is essentially unrecognizable to us," and that in the first fifteen years of the twentieth century, "at least 45% of the U.S. cities with populations over 5,000 had competing, non-interconnected telephone exchanges." LAWRENCE LESSIG, THE FUTURE OF IDEAS 27 (2002). The result was that while the reach of the telephone as a technology was great, with "30% of residences having a telephone[,] the networks did not interconnect." *Id.* With the early telephone systems "when you purchased telephone service, your decision in part depended on whom you wanted to call and what service they were likely to have. The world was then with telephones . . . as the world with instant messaging is today." *Id.*

9. LESSIG, *supra* note 8, at 45.

10. *Id.* at 40 (describing an innovation commons as an open network design where "innovators can develop and deploy new applications . . . *without the permission of anyone else*") (emphasis added)). Such a design has been critical to the proliferation of Internet services and software applications. *Id.*; Jason Oxman, *The FCC and the Unregulation of the Internet*, Office of Plans and Policy, OPP Working Paper No. 31, at 5 (July 1999), *available at* ftp://www.fcc.gov/pub/Bureaus/OPP/working_papers/oppwp31.pdf ("The most important technical feature of the Internet is its openness, which allows any user to develop new applications and to communicate with virtually any other user.").

11. Merger Order, *supra* note 4, ¶ 131.

12. Gerald R. Faulhaber, *Network Effects and Merger Analysis: Instant Messaging and the AOL-Time Warner Case*, 26 TELECOMM. POL'Y 311, 317 (2002) [hereinafter Faulhaber,

the servers of one IM provider sharing information with the servers of another IM provider to facilitate this user-to-user communication.[13] In order for the servers to interoperate in this fashion, the providers must share with each other information about the technical standards undergirding their IM systems.

The market leaders' closed standards are able to exclude potential entrants from the IM market because of a phenomenon economists describe as "network effects."[14] The most famous example of an industry characterized by network effects is the telephone business, in which the value a customer places on being a member of the telephone network increases with each new subscriber to the network.[15] Instant messaging is a classic example of a "service imbued with network effects, in which the value to each customer depends upon the number of other customers (and who they are) who also use the service."[16]

When the providers of a service characterized by network effects choose to interconnect, the result is beneficial for consumers and companies seeking to innovate because "customers of even the smallest competitor get the benefits of connecting to everyone, which enhances competition."[17] Generally, interconnection always adds value from the consumer's point of view because the users of any one service will have access to a larger overall number of users of the same technology whenever their service chooses to connect to the network of another service provider.[18] Nonetheless, companies often make strategic use of network effects to keep consumers tied to a particular product or service and keep rivals out of the market.[19] Despite the negative implications

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Network Effects].

13. Merger Order, *supra* note 4, ¶ 192 n.493. Experts have declared that achieving such interoperability is technically a fairly straightforward procedure. Faulhaber, *Network Effects*, *supra* note 12, at 323 (describing the view of the FCC's technologists at the time of the merger that "interoperability of IM systems was slightly more difficult than interoperability of e-mail, which is *technically* quite easy").

14. *See* Faulhaber, *Network Effects*, *supra* note 12, at 315.

15. *Id.*

16. *Id.*

17. *Id.*

18. *See* Gerald R. Faulhaber, *Access* ≠ $Access_1$ + $Access_2$, 2002 L. REV. M.S.U.-D.C.L. 677, 691 (2002) [hereinafter Faulhaber, *Access*].

19. Speta writes:

> Where network effects occur, products or manufacturers may become entrenched. Consumers may be unwilling to switch to a new technology, even if that technology is better or cheaper, if they are not convinced that a sufficient number of other consumers will also switch. In other words, consumers may value the current network's interconnectedness more than they value the new technology. The

for their customers, companies acting strategically will refuse to interconnect as a way to dampen competition in the marketplace. Such a company acts on the belief that the "short-term loss in value from refusing interconnection could be more than made up by the long-term gain in firm value from increasing market share" [20] at the expense of those companies with which it refuses to interconnect. "Refusal to interoperate can thus become a strategy for precluding competition with no offsetting benefit to customers."[21]

By the time the AOL Time Warner merger came before the FCC for review in 2000, the facts had borne out the above theories as to the likely dynamics of a market in which a dominant firm has made strategic use of network effects. AOL's IM services controlled approximately sixty-one percent of the IM market, while Microsoft and Yahoo! controlled roughly twenty-two and nineteen percent, respectively.[22] AOL prevented other IM providers from interoperating with its own services by actively blocking other providers' attempts to have their servers connect to those of AOL.[23] Moreover, would-be entrants into the IM marketplace failed to establish a foothold and, in some cases, went out of business.[24]

III. FCC REGULATION OF IM AS PART OF THE AOL TIME WARNER MERGER

Against this backdrop, the FCC regulated IM in 2001, in connection with its review of the proposed merger of AOL and Time Warner. The review was predicated on the FCC's authority to insure that the "transfer of control of Time Warner's cable licenses [to the merged

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> corollary is that the current owners of the networks will often have strong incentives to exclude rivals, especially new entrants.

Speta, *supra* note 4, at 251. *See also* Faulhaber, *Access*, *supra* note 18, at 691-92 ("Network effects industries may have a 'start up' problem; the initial networks may be so small that they are not sufficiently attractive to potential customers . . . .").

20. Faulhaber, *Access*, *supra* note 18, at 694.

21. *Id.*

22. Removal Order, *supra* note 7, ¶ 6. *See also* Affidavit of Prof. William P. Rogerson, Petition of AOL Time Warner, Inc. for Relief, at 8 (Apr. 2, 2003), *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner, Inc., Transferee*, FCC CS Docket No. 00-30, 16 F.C.C.R. 6547 [hereinafter Petition for Relief, Rogerson Affidavit 1] (presenting per month user data of instant messaging services, Mar. 2000-Sept. 2002).

23. *See* Merger Order, *supra* note 4, ¶ 129.

24. *Id.* ¶ 160 & n.435.

company] serves the public interest."[25] The FCC found that the "IM business [was] not competitive"[26] and was "characterized by strong 'network effects.'"[27] The FCC also found that AOL was "by far the leading provider of IM"[28] at the time of the merger review, and had taken advantage of its position in the IM market to benefit itself at the expense of consumers and other Internet companies.[29]

Though the FCC stated that it could not "express [an] opinion whether the factual conclusions in this Order can be characterized as amounting to a tipped market,"[308] the majority opinion nonetheless "employ[ed] a market 'tipping' analysis in an effort to . . . demonstrate that the IM market has nearly tipped, or will tip when AOL combines with Time Warner."[31] Tipping occurs "when a single provider reaches a critical mass of customers that are so attractive to others that competitors must inevitably shrink, in the absence of interoperation."[32] The FCC believed that its predominant market position would enable the merged company to extend its dominance into the next generation of IM services, which would likely be deployed over broadband connections, such as the Time Warner cable assets AOL would acquire as part of the merger.[33] The FCC termed these next generation IM services "advanced IM-based high-speed services" (AIHS.)[34] To prevent the emergence of this predicted dominance, which the FCC believed would inhibit competition and harm consumer welfare, the FCC imposed a condition (Condition) upon its approval of the merger.[35]

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25. *Id.* ¶ 146.

26. *Id.* ¶ 149.

27. *Id.* ¶ 129.

28. Merger Order, *supra* note 4, ¶ 160.

29. *See id.* ¶ 129 (finding that "AOL has consistently resisted interoperability with other . . . IM providers" and that its "market dominance . . . establishes a very high barrier to entry for competitors that contravenes the public interest in open and interoperable communications systems, the development of the Internet, consumer choice, competition and innovation").

30. *Id.* ¶ 129 n.368.

31. *Statement of Commissioner Michael K. Powell, Concurring in Part, Dissenting in Part, Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner, Inc., Transferee*, FCC CS Docket No. 00-30, 16 F.C.C.R. 6547, 6704 (2001) (Memorandum Opinion and Order) [hereinafter Merger Order: Powell Statement].

32. Faulhaber, *Network Effects*, *supra* note 12, at 316.

33. Merger Order, *supra* note 4, ¶ 130.

34. *Id.* ¶ 128.

35. *Id.* ¶ 189.

In short, the Condition required AOL to become interoperable with other IM providers before releasing any AIHS into the marketplace.[36] As a prerequisite to offering any AIHS to the public, the Condition provided that AOL had to either adopt a publicly available standard for interoperability "promulgated by the IETF [Internet Engineering Task Force] or a widely recognized standard-setting body," or demonstrate that it had "entered into written contracts providing for . . . interoperability with significant, unaffiliated, actual[,] or potential competing providers of [IM] services offered to the public."[37] The FCC also provided AOL with a third option: to "seek relief from the [C]ondition . . . by filing a petition demonstrating that imposition of the [C]ondition no longer serves the public interest, convenience[,] and necessity because there has been a material change of circumstance."[38] If at any time following the imposition of the Condition AOL could "demonstrate that it [had] not been a dominant provider of [IM] services for at least four . . . consecutive months," the company could request that the FCC remove the Condition.[39]

Before imposing this Condition on AOL, the FCC had never deigned to regulate software platforms native to the Internet; a step the agency traditionally believed would thwart rather than promote competition.[40] Before the imposition of the Condition, a well-

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36. *Id.* ¶ 190.

37. *Id.* ¶ 192-93. There is an important analytical distinction to be made between the FCC's two options for achieving interoperability. The first option, the open standards approach, is, as discussed previously, the prevailing paradigm with respect to the protocols for the Web and e-mail. Any Web developer can create a Web site that can be visited by the overwhelming majority of Web users without the developer having to seek permission to use proprietary standards. The second option involves interconnection achieved not through open standards, but through interconnection agreements made between providers; the standards remain proprietary but are licensed to interested parties at reasonable rates on a non-discriminatory basis. This second approach is the one traditionally followed by the FCC in its regulation of the telephone business; for more on how this style of regulation could be applied to IM, *see infra* text accompanying notes 94-97. While interconnection by agreement could open up the IM marketplace and thus foster competition and consumer welfare, it is not the regulatory model advocated by this Comment. My reasons for advocating open-standards-based interoperability, which essentially boil down to achieving administrative feasibility and maximum levels of industry competition and innovation, form the basis of a significant part of this Comment, *see infra* Part V.

38. Merger Order, *supra* note 4, ¶ 195.

39. *Id.* *See* discussion *infra* Part IV for analysis of AOL's Petition for Relief based on this element of the Condition.

40. In his separate statement, Commissioner Powell noted that by imposing the Condition the FCC was "*exercising* jurisdiction over a service and product that springs directly from the Internet," resulting in a "regulatory foray across a border consistently held to be inviolate." *See* Merger Order: Powell Statement, *supra* note 31, at 6712-13. *See also*

established distinction maintained by the FCC between telecommunications services and information services left software platforms like IM outside the sphere of FCC regulation.[41] However, with regard to IM, this long-adhered-to distinction butted heads with another "long-standing tradition" identified by the FCC: the "open and interoperable" nature of the Internet.[42]

The distinction between information and telecommunications services has been criticized as a relic of the pre-Internet regulatory landscape, one that no longer serves a meaningful purpose.[43] Even an outspoken critic of FCC regulation of the Internet as its former chairman Michael K. Powell, then time a commissioner with the FCC,

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Weiser, *Internet Governance*, *supra* note 3, at 843 (noting that imposing the Condition took the FCC into "novel terrain" by instituting "for the first time in its history a regulatory regime for an Internet-based information platform comprised of software (as opposed to hardware)").

41. Philip J. Weiser, *Law and Information Platforms*, 1 J. TELECOM. & HIGH TECH L. 1, 11 (2002) [hereinafter Weiser, *Information Platforms*] (noting the "classic distinction" between information and communications services historically employed by the FCC to "avoid regulating the computer industry"). The distinction between telecommunication services, or "basic services," and information services, or "enhanced services," has been analogized to the difference between a pipeline that is used to transport crude oil and a refinery that processes the oil into finished products like gasoline. *See* Oxman, *supra* note 10, at 12. Applying the analogy, telephone lines are the equivalent of the oil pipeline and simply transport their cargo, which is data, without interacting with it. The telephone lines are the basic services that the FCC has long regulated. Internet service providers, or ISPs, on the other hand, are the equivalent of the oil refinery, receiving the data from the telephone line and performing "computer processing" on them so that users can send, retrieve, and store data in a way that suits their needs. The ISP is an enhanced information service of the sort traditionally not regulated by the FCC. *Id.* at 12-13.

42. Merger Order, *supra* note 4, ¶ 131.

43. Weiser, *Information Platforms*, *supra* note 41, at 10-11:

> At some point down the road, traditional telecommunications usage as we knew it—either through the use of fax or voice communications—may ultimately cease to exist at all, with all traffic traveling over the Internet as a digital application .... [T]his specter haunts telecommunications regulation and requires that, at some point, telecommunications regulation will be linked inextricably with Internet regulation. Put simply, it makes no sense to regulate telecommunications and leave the Internet unregulated.

Id. The premise behind government regulation of basic, but not enhanced, services is that if the phone lines themselves, the basic layer of the communications infrastructure, remained open to all, competition would thrive and the public welfare would be served without any need to regulate the companies that provided enhanced services over the phone lines, for example, ISPs. Given the current state of the Internet, however, it may no longer be wise to "assume that the gates will be at the 'physical' layer [only;] ... [d]epending on how the Internet evolves, an Internet portal, Internet Service Provider, or possibly a browser product, could attempt to leverage a dominant position in a way that might discriminate against rival applications." *Id.* at 13.

has agreed that "the telecommunications/information services distinction is . . . untenable."[44] The importance of maintaining an open, interoperable Internet in the face of increasing balkanization, coupled with the recognition (even by those opposing the Condition) that the distinction between information and telecommunications services had outlived its usefulness, convinced the FCC to buck traditional agency practice and regulate the IM market as part of approving the AOL Time Warner merger.

The FCC's majority opinion was soundly criticized by Powell for attempting to spur industry-wide interoperability under the guise of a condition purportedly geared toward the behavior of the merged company alone. Powell doubted that mandated interoperability was the appropriate move for the FCC to make.[45] Powell stated that if such industry-wide regulation were in order "such a grand conclusion should only be reached after very careful and thoughtful deliberations and full comment by a wide range of interested parties, which can only be achieved in a rulemaking proceeding."[46] Powell went on to state that the AOL Time Warner merger, which involved "only two members of the industry," was "not an appropriate vehicle for taking our authority where the Majority does today."[47] Indeed, the main thrust of Powell's partial dissent appears to have been "a procedural criticism of the FCC's choice to act in the context of a merger review."[48]

Powell's procedural criticism was not entirely misguided; total interoperability among all IM providers *does* appear to have been the FCC's ultimate goal. This sentiment manifested itself at various points in the Merger Order. The majority stated that "the public interest is served by interoperability among [IM providers] . . . because interoperability will bring concrete and significant improvements to *all* consumers."[49] The majority added, "With interoperability, communication between users that was inconvenient becomes convenient, communication that was impossible becomes possible, and

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44. Merger Order: Powell Statement, *supra* note 31, at 6712. Powell continued, predicting that the growth of the Internet will "increasingly blur and obliterate the ability to make any rational distinction between the transmission of information and the information itself." *Id.*

45. *Id.* at 6713.

46. *Id.*

47. *Id.*

48. Weiser, *Internet Governance*, *supra* note 3, at 843-44 n.115.

49. Merger Order, *supra* note 4, ¶ 131 (emphasis added).

new entrants are enabled to bring their innovations and creativity promptly to the largest possible number of users."[50]

Elsewhere in the Merger Order, the majority attempted to rein-in its industry-wide aspirations by tightening its focus on the regulation of AOL. Responding to a suggestion offered by AOL in one of its pre-merger filings, that it would be more appropriate for the FCC to address the interoperability issue in a broadly applicable rulemaking,[51] the majority emphasized that its concerns flowed "specifically and exclusively, from AOL's role, and not from any other company's" in exerting control over IM services.[52] Nevertheless, the majority acknowledged that its concerns were "time-sensitive, focusing as they do on current events in the emerging business of new interactive services."[53] The majority went on to state that "*[b]y the time a rulemaking ended*, the domination by AOL Time Warner that we today find likely might well have been achieved and be beyond correction by marketplace forces."[54] This statement reveals the majority's belief that a rulemaking may have been appropriate but for the delay associated with the process, delay that would further entrench AOL's dominant position and potentially result in the need for a more "intense" brand of government regulation in contrast to the "light-handed" regulation represented by the Condition.[55]

Clearly, the FCC acted on the premise that if it could get AOL to interoperate then the rest of the market would likely follow. This premise is well-founded because once the provider with the largest network has opened its network to other providers, "all providers are better off interoperating."[56] Only a company that believes the market has tipped in its favor would be likely to refuse interoperation in an attempt to "gain market share at the expense of [its] competitors."[57] If AOL's network was open to access by other IM providers, no other company could reasonably believe that it had sufficient market share to

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50. *Id.*

51. *See* Letter from Peter D. Ross, Counsel for AOL, Wiley, Rein, & Fielding, to Magalie Roman Salas, Secretary, FCC, at 5 (Sept. 19, 2000) *at* http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6511858245.

52. Merger Order, *supra* note 4, ¶ 186.

53. *Id.*

54. *Id.* (emphasis added).

55. *Id.*

56. Faulhaber, *Network Effects*, *supra* note 12, at 321.

57. *Id.*

profitably refuse interoperation. In this way, the FCC's regulation of AOL had the potential to regulate the entire IM marketplace.

Though critics like Powell found something duplicitous in the majority's use of its merger-specific review to achieve broad-based interoperability, the majority simply did an expedient job of using its "well-settled statutory obligations"[58] to "examine the impact of the proposed merger"[59] on the "policies and objectives of the Communications Act,"[60] which include ensuring competition and the continued growth of the Internet.[61] While the FCC was able to move expeditiously toward consumer-benefiting, innovation-engendering openness in IM, via a merger-specific condition (regulating AOL effectively regulated the entire market), it is critical to remember that the agency's true goal appeared to be total interoperability and not simply preventing AOL from achieving monopoly status. That is to say, it is important to view the regulation of AOL's near monopoly status as a means to an end, rather than as an end in and of itself.[62]

IV. THE FCC'S REMOVAL OF THE CONDITION AND THE RETURN TO A DEREGULATED IM MARKET

In the summer of 2003, in a 3-2 decision the FCC voted to remove the Condition it had previously placed on AOL, thus exiting the IM-regulation sphere it had pioneered only two years earlier.[63] The FCC's initial foray into regulating IM was criticized for going too far by attempting to affect what should have been industry-wide regulation promulgated by a formal rulemaking process in the context of a merger-specific proceeding. The FCC's departure from IM regulation can and should be criticized much more strongly for going too far in the other direction. Instead of beginning the transition from the company-specific regulation represented by the Condition to necessary industry-wide regulation, the FCC simply stepped out of the regulatory space entirely, deregulating an IM market that had come to be characterized by a lack of meaningful innovation or broad-based competition.

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58. Merger Order, *supra* note 4, ¶ 128.

59. *Id.* ¶ 132.

60. *Id.* ¶ 150.

61. *Id.*

62. The significance of the distinction will become apparent *infra* Part IV, where the FCC's decision to remove the Condition on the basis of Time Warner's shifting market share is criticized as being inconsistent with the agency's previously expressed findings and goals.

63. *See* Removal Order, *supra* note 7, ¶ 15.

The FCC's decision to remove the Condition from AOL and get out of the IM-regulation arena was based primarily on the grounds that AOL had ceded a few percentage points of market share to its sole competitors, Microsoft and Yahoo!.[64] The Removal Order cites figures for a five-month period in 2002-2003, indicating a two percent drop in AOL's market share, a ten percent gain for Microsoft, and a four percent gain for Yahoo!.[65] The FCC described this trend as "inconsistent with the market 'tipping' concerns expressed in the [Merger Order]."[66] The FCC reasoned that if the IM market had not tipped or was not in imminent danger of tipping, then regulation simply was not warranted. Finding the market no longer in a tipped or an imminently "tippable" state, the majority concluded that "removal of the IM [C]ondition will likely provide public interest benefits" in the form of increased competition and increased consumer choice.[67]

There are two main problems with this reasoning. First, as will be discussed below, it is possible that AOL still could have been considered dominant despite small changes in the overall composition of the market, in which case the Condition should not have been lifted. Indeed, assuming that AOL still was dominant, the Condition was removed at the worst possible time because AOL was prepared to roll out the type of advanced IM services envisioned by the FCC at the time of the merger, which were the very subject matter of the Condition.[68] Second, even if one found that AOL no longer controlled the market, the FCC's decision that total deregulation would be good for the public, and for competition generally, directly contradicts its earlier conclusions. In the Merger Order, the majority stated that from the perspective of engendering a fully competitive and innovative marketplace, the "prospect of a tight oligopoly of three IM providers (AOL, Microsoft, and Yahoo!)" is "similarly unattractive" when

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64. *Id.* ¶ 6.

65. *Id.*

66. *Id.* "In particular, if a market is subject to tipping and the subsequent dominance of the largest firm, then as the overall market grows, we should see an increase in the largest firm's market share . . . ." *Id.* "In fact, the data show the opposite trend; the smaller firms are consistently growing at the expense of AOL Time Warner." Removal Order, *supra* note 7, ¶ 12.

67. *Id.* ¶ 12.

68. *Id.* (Copps & Adelstein, dissenting) (stressing urgency of not removing the Condition given that "AOL Time Warner has only recently begun to market AOL Broadband for which advanced IM-based high-speed services are relevant."). *See infra* text accompanying notes 78-80 discussing the significance of the timing of AOL's Petition with respect to its plans for AIHS.

compared to an IM monopoly held by AOL alone.[69] In this case, the Condition should have been removed *only* if it was replaced not with total deregulation but with industry-wide, mandatory interoperability for all IM providers that would prevent any tight oligopoly from controlling the fate of the IM platform.

A. Was AOL Still Dominant?

The majority in the Removal Order concluded that AOL was no longer dominant and the IM market had neither tipped nor remained tippable in AOL's favor largely based on a slight decline in AOL's market share. The dissenting opinion called the majority's analysis "inconsistent" and its conclusions "perfunctory."[70] The dissent found that AOL was still "the market leader" with a "mass of users . . . larger than all other providers combined," and criticized the majority for failing to conduct the necessary level of analysis and for improvidently removing the Condition.[71]

The dissent's view of the inadequacy of the majority's economic analysis is supported by economic theory. Under certain conditions, a market can still be considered tipped or tippable even when a supposedly dominant company's share diminishes somewhat while other firms' shares increase.[72] The critical component of this theory is that the market at issue be growing, as opposed to mature, which was unmistakably the nature of the IM market at the time the Condition was removed.[73] When a market is not mature, "growth in customer base is not . . . dispositive of market tipping."[74] As competitors of the dominant company make investments in customer acquisition through, for example, marketing efforts, their market share can grow despite the

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69. Merger Order, *supra* note 4, ¶ 163 n.447.

70. Removal Order, *supra* note 7, at 12 (Copps & Adelstein, dissenting).

71. *Id.* ("AOL's market share may have eroded slightly, but the majority has not conducted the requisite analysis of these market changes and their implications for the public interest . . . . As such, any removal of the condition is premature and unwarranted.").

72. *See* Faulhaber, *Network Effects*, *supra* note 12, at 324.

73. Comments of Professors Gerald D. Faulhaber & David J. Farber on AOL Time Warner's Petition for Relief (Apr. 5, 2003), *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner, Inc., Transferee*, FCC CS Docket No. 00-30, 16 F.C.C.R. 6547,16 F.C.C.R. 6547, ¶ 138 (2001) [hereinafter Faulhaber Comments] (pointing to a 57% increase in IM usage from 2001 to 2002, citing Charles S. Colvin, *This Is Not Your Teenager's Instant Messaging*, FORRESTER RESEARCH REPORT (Jan. 2003).

74. Faulhaber, *Network Effects*, *supra* note 12, at 324.

market being in a tipped state overall.[75] Thus, AOL's assertion that the market could not have tipped in its favor because it had lost market share to Microsoft and Yahoo! is not necessarily true in the context of an expanding IM market.[76]

If one were to conclude based on the preceding analysis that AOL still could have been considered the dominant IM provider, then the FCC's decision to remove the Condition happened at the worst possible time—just as the roughly two-year-old restriction finally appeared to have a chance of producing its intended regulatory effect. Since the merger was approved, AOL had for the most part failed to exploit its cable assets, giving it little incentive to comply with the terms of the Condition.[77] Around the time of AOL's Petition to the FCC to lift the Condition, however, the company was becoming increasingly interested in making an entry in so-called AIHS.[78] Its competitors had already made video-oriented IM services available to the public, and AOL was ready to debut similar services,[79] but the Condition prevented AOL from deploying such services without taking steps to achieve interoperability. Thus, just as the Condition appeared as if it might have some teeth and a genuine chance of achieving its regulatory aims, the

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75. *See* Faulhaber Comments, *supra* note 73; *see also* Faulhaber, *Network Effects*, *supra* note 12, at 324:

> New customers are constantly entering the market, and their choice of provider is likely guided by marketing efforts of the providers, as they are likely to know little about the network effects of the business until they experience the service (and are unable to connect with friends on other services).

Id.

76. Faulhaber, *Network Effects*, *supra* note 12, at 324. As Faulhaber points out, "Tipping does not [necessarily] imply that the market is at monopoly or near-monopoly; merely that market conditions are such that this will be the ultimate outcome." Faulhaber, *Access*, *supra* note 18, at 695; *see also* Philip J. Weiser, *The Internet, Innovation, and Intellectual Property Policy*, 103 COLUM. L. REV. 534, 594 n.254 (2003) [hereinafter Weiser, *Innovation*] (stating that market shares of 50-70% are often used by courts as threshold indicators of monopolistic power, which is not interpreted to mean 100% control but rather an ability to exclude competitors and generally exert a considerable degree of control over a market, citing RICHARD A. POSNER, ANTITRUST LAW, 195-96 (2d ed. 2001)).

77. Faulhaber Comments, *supra* note 73.

78. Jim Hu & Paul Festa, *AOL Fights IM Fade-out*, CNET News.com (Apr. 15, 2003), *at* http://news.com.com/2100-1032-996837.html (reporting Time Warner's testing of video-related IM services roughly two weeks after submitting its Petition to the FCC). These test services did not employ live streaming video but rather a video-snapshot that would be sent from user to user in a manner not unlike a file attached to an e-mail. *Id.* Time Warner maintained that such a feature would not have been a violation of the Condition. *Id.* Had the Condition not been removed, this contention would have merited analysis; with the Condition removed, whether the tests would have violated the Condition is moot.

79. Removal Order, *supra* note 7, ¶ 12.

FCC removed the Condition and arguably let loose the exact market dynamic that the merger-approving FCC found so troublesome and had imposed the Condition to prevent.[80] Had the Condition been left in place, AOL's desire to enter the advanced IM services market would have put increased pressure on AOL to interoperate, which as discussed above would have been likely to open up rest the of the marketplace.

B. From Monopoly to Oligopoly (or Maybe Duopoly)

Even if the FCC was correct in concluding that AOL no longer dominated the IM market, the agency's decision to deregulate IM entirely contradicts its earlier commitment to full interoperability in service of a robustly competitive innovation space. The FCC stated in the Merger Order that the "prospect of a tight oligopoly of three IM providers (AOL, Microsoft, and Yahoo!)" was "similarly unattractive" when compared to an IM monopoly held by AOL alone.[81] Reacting to a suggestion by AOL that Microsoft represented a bona fide threat to any alleged dominance by AOL, the FCC clearly stated its belief that were Microsoft's IM service to grow to "rival AOL's, the result would be merely a duopoly, not the healthy competition that exists today in electronic mail and that *we hope will exist in new IM-based services.*"[82]

The very fact that the FCC lifted the Condition means it believed that a market tipped in AOL's favor was not imminent; however, it also means that the tight oligopoly was becoming a reality because no other companies had made a dent in the consumer IM marketplace. AOL's loss was by definition Yahoo! and Microsoft's gain. However, this speaks to the need to regulate the whole market, based on the FCC's description of a tight oligopoly as undesirable and competition stifling, as opposed to walking away entirely from any IM regulation.

In part, the FCC's finding that "a regulatory mandate for IM interoperability is less important today then it was at the time of the merger" was based on the "emergence of the Trillian interoperability

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80. Faulhaber Comments, *supra* note 73.

> It should not come as a surprise that as AOL Time Warner rolls out its new broadband offering, it wishes to be relieved of the requirement to interoperate if it offers an IM-based high-speed service. Their behavior suggests that they may well have such a service ready to roll out soon . . . *and wish to keep their network effects proprietary.* In fact, it is precisely this case that the Merger Order anticipated when it imposed the IM condition.

Id. (emphasis added).

81. Merger Order, *supra* note 4, ¶ 163 n.447.

82. *Id.* ¶ 163 (emphasis added).

application, which can supply 'as if' interoperability among the three leading IM providers."[83] "As if" interoperability, as exemplified by the Trillian application, allows users who have registered with multiple IM providers to access all of their accounts from within a single software application.[84] Within a month of the FCC making this rationale public, however, Microsoft and Yahoo! had both announced the release of mandatory upgrades of their IM software that blocked third-party IM clients, including Trillian, from communicating with their users.[85] Microsoft claimed that security was the reason for its blocking efforts, while Yahoo! invoked protecting its users' privacy as a primary justification.[86] These are precisely the reasons offered by AOL, somewhat unconvincingly, for resisting interoperability prior to the initial FCC regulatory action.[87] As soon as the FCC stepped away from regulating the IM platform, the history of closed-access exclusionary tactics immediately started to repeat itself. This is evidence not only that the FCC should not be stepping away from IM regulation but also that it should be regulating the entire IM industry rather than one particular company.

There are additional reasons to be concerned about Microsoft's ability to thwart competition in the IM market. As shown by Microsoft's ultimate domination of the Web browser market, which had been dominated by Netscape, "Microsoft's ability to overcome a rival's

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83. Removal Order, *supra* note 7, ¶ 11.

84. *See Trillian: Your Freedom to Chat at* http://www.ceruleanstudios.com/products/overview_basic.php (last visited Oct. 10, 2004). Significantly, what "as if" interoperability cannot achieve is allowing users who have signed up with one service, say, AOL, to chat directly with users who have signed up with another service, say, Microsoft. This is the true, e-mail-like interoperability advocated by this Comment.

85. *See* Christopher Saunders, *Yahoo! Blocks Third-Party IM, Considers Trillian Clone*, Instant Messaging Planet (Sept. 17, 2003), *at* http://www.instantmessagingplanet.com/public/article.php/3079191; Christopher Saunders, *Microsoft Takes Security Steps with Messenger*, Instant Messaging Planet (Aug. 20, 2003), *at* http://www.instantmessagingplanet.com/public/article.php/3066581. The developers of programs like Trillian are chief among those who would benefit from the competition space opened up by a mandated interoperability. The company is committed to focusing the IM market on product development rather than network effects. There is only so much of an ultimate market for Trillian, however, because a user cannot use it to chat with friends who use particular IM services without the Trillian user maintaining her own distinct account on those services. Moreover, the usefulness of Trillian's software decreases markedly, if not entirely, when the very IM systems it serves to connect with block Trillian's users.

86. *See* Saunders, *Microsoft Takes Security Steps with Messenger*, *supra* note 85; Saunders, *Yahoo! Blocks Third-Party IM, Considers Trillian Clone*, *supra* note 85.

87. *See* Merger Order, *supra* note 4, ¶ 170 (discussing the veracity of security and privacy concerns pre-merger).

early lead should not be underestimated."[88] One study predicts that by 2007, Microsoft will have a larger share of the IM market than AOL.[89] A significant component of Microsoft's IM strategy consists of including its IM software as part of its dominant Windows operating system.[90]

In this context, Microsoft is an example of what one economist describes as a "fast follower," a firm with the ability to enlist many new customers for its services despite being a smaller player in an industry characterized by network effects and currently dominated by another company.[91] Such a fast follower would be willing to refuse interconnection in the short term (thereby temporarily decreasing its own customers' welfare) in the expectation that it will eventually "surpass the current market leader and tip the market [toward] itself."[92] As it did in the browser wars, Microsoft can hold out until these anticipated market shifts come to pass.

The fast follower phenomenon is perhaps the most compelling explanation for another piece of evidence relied on by the majority in the Removal Order as proof that AOL was no longer dominant—the lack of voluntary interconnection between Microsoft and Yahoo!.[93] To the extent that Microsoft is pursuing the strategy of a fast follower, in light of its demonstrated ability to catch up to a market leader and auspicious predictions about its future market share, then it is inaccurate to attribute strategic significance to the fact that Yahoo! has not interoperated with Microsoft. Yahoo! might have little say in the matter. Microsoft arguably has a long-term strategic reason to refuse such interoperability despite the likelihood that it would have an immediate negative effect on AOL's present dominance by creating an interconnected mass of roughly forty percent of all IM users, a group

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88. Weiser, *Internet Governance*, *supra* note 3, at 845.

89. Kristi Heim, *Microsoft to push instant messaging for business*, SAN JOSE MERCURY NEWS, (Mar. 6, 2003), *available at* http://www.siliconvalley.com/mld/siliconvalley/business/special_packages/ms_antitrust/5335953.htm.

90. Merger Order, *supra* note 4, ¶ 163; Petition of AOL Time Warner, Inc. for Relief, at 13(Apr. 2, 2003), *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner, Inc., Transferee*, FCC CS Docket No. 00-30, 16 F.C.C.R. 6547 [hereinafter Petition for Relief].

91. Faulhaber, *Access*, *supra* note 18, at 696.

92. *Id.*

93. Removal Order, *supra* note 7, ¶ 11 (concluding that "because the other two large IM providers, Microsoft and Yahoo!, have chosen not to interoperate with each other, these providers must believe that the market is competitive and that their own market presence is strong enough").

much closer to the size of AOL's network than the user base of either Yahoo! or Microsoft standing alone.

Thus, Microsoft and Yahoo!'s failure to interoperate potentially may have less to do with both companies sharing a belief in a genuinely competitive marketplace than with strategic behavior on the part of Microsoft. Evidence that this is so, and that Yahoo! is not in a position to enact the type of interoperability the FCC claimed it was purposely avoiding can be found in published reports indicating significant interest within Yahoo! in offering a multi-IM client along the lines of Trillian.[94] Such an offering would make little sense if Yahoo! was in a position simply to agree with Microsoft to interoperate; it would make considerably more sense for Yahoo! if the company was concerned about its ability, as the oligopolist with the smallest market share, to maintain its market presence in the face of a now-deregulated AOL and a fast-following Microsoft.

In addition to industry-wide "as if" interoperability via the Trillian application (which Microsoft and Yahoo! disabled with respect to their own networks immediately following the Condition's removal) and the failure of Microsoft and Yahoo! to agree to interoperate (which may be evidence of nothing more than strategic behavior by Microsoft), the FCC offered the existence of an interconnection agreement by Microsoft and AOL as further evidence that IM regulation was unwarranted.[95] According to news reports published at the time of this agreement, however, there was reason to believe that the agreement might amount to a glorified press release.[96] The agreement appeared to commit the parties to nothing more than sitting down to a few meetings to discuss interoperability issues.[97] The timing of the agreement was suspicious coming as it did *after* AOL filed its Petition for Relief with the FCC seeking removal of the Condition and *before* the FCC had

94. *See* Saunders, *Yahoo! Blocks Third-Party IM, Considers Trillian Clone*, *supra* note 86 (discussing Yahoo!'s research into consumers' interest in a product that would tap into rivals' systems).

95. Removal Order, *supra* note 7, ¶ 11 (stating that "market-based initiatives, such as the Microsoft-AOL Time Warner agreement . . . demonstrate positive momentum toward achieving interoperability").

96. *See* Ed Frauenheim & Jim Hu, *AOL, Microsoft to Talk about IM*, CNET News.com (May 29, 2003), *at* http://news.com.com/2100-1032-1011379.html (noting general skepticism among industry analysts as to the substance of the agreement, which was only part of a much larger settlement between the two companies over issues largely unrelated to IM).

97. "AOL Time Warner and Microsoft said they'd discuss IM interoperability as part of a broader agreement between the two media powerhouses to collaborate on digital media initiatives and settle pending litigation." *Id.*

made its decision to grant that relief. That the agreement ended up cited by the FCC as evidence that the Condition should be lifted smacks of clever public relations scheming, especially given the fact that nothing of any substance has been made public to indicate the slightest bit of progress toward achieving interoperability for the average consumer IM user. Indeed, AOL has on several previous occasions publicly expressed interest in interoperability, only to pull back citing concerns over privacy and security.[98] The familiar shibboleth hangs over this purported agreement as well.[99]

In the event that the industry watchers turn out to be mistaken and AOL and Microsoft do eventually interoperate because of this deal, there would still be an important role for the FCC to play. Such an agreement has the same kind of potential to foster an anticompetitive marketplace as the prevalence of closed standards because two dominant firms could agree to share a particular market at the expense of other excluded players.[100] These alliances should not be discretionary or exclusive but should conform to a basic nondiscrimination mandate. In its Merger Order, the FCC acknowledged the importance of a nondiscrimination policy by including such a policy in the Condition itself.[101] Under the terms of the Condition, if AOL chose to offer AIHS to the public and did not want to adopt a publicly available standard, it had to agree to negotiate in good faith with any interested entity toward a contractual agreement to interoperate.[102] A nondiscrimination policy of this type is consistent with the common carrier rules that have historically applied to communications networks in the United States,[103]

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98. Merger Order, *supra* note 4, ¶¶ 169-70 (noting AOL's history of committing to, and then backing away from, interoperability, and attributing its recurring reticence to concerns about user privacy and security).

99. *See* Christopher Saunders, *AOL: We'll Explore Interoperability*, Instant Messaging Planet (May 30, 2003), *at* www.instantmessagingplanet.com/public/article.php/2214651 (noting that "interoperability would seem more likely if not for the implication that should either partner feel that a joint solution compromises 'consumer privacy, security [or] network performance,' the deal is off").

100. Frauenheim & Hu, *supra* note 96 (noting that to the extent "Microsoft and AOL genuinely plan to get their IM products to talk with each other, it may be part of a strategy to 'squish the smaller competitors'").

101. *See supra* notes 36-39 and accompanying text for the full scope of the Condition. As for the significance of the distinction between an open-standards approach to interoperability and contractually based interconnection based on reasonable, nondiscriminatory licensing of proprietary standards, *see supra* note 37 and *infra* note 104.

102. Merger Order, *supra* note 4, ¶ 193 & n.497.

103. *See infra* notes 112-19 and accompanying text for details on common carrier regulation in the context of IM.

and would necessarily require oversight and enforcement from a governmental agency. That the FCC, when removing the Condition, interpreted the agreement between AOL and Microsoft as a reason to deregulate, as opposed to yet another potential reason for regulation, is inconsistent with its prior rulings and the views of numerous industry analysts and scholars.

V. FCC-MANDATED INTEROPERABILITY FOR THE IM INDUSTRY AS A WHOLE

When the FCC decided to regulate IM by conditioning AOL's ability to launch next-generation IM services on the company's willingness to open its IM network to competing providers, the agency took a bold step in the direction of meaningful telecommunications regulation for the Internet age. Eschewing traditional distinctions between telecommunications and information services, the FCC recognized that a company in control of a pervasive communications platform like IM could limit competition and innovation (in contravention of the public interest) in the same manner as a company with a monopoly over the telephone wires. By reversing course two years later and removing the Condition from AOL with no further action, the FCC derailed its promising regulatory effort, basing its decision on the flawed conclusion that AOL did not truly dominate the IM market and that the tight oligopoly of AOL, Microsoft and Yahoo! provided the IM market with sufficient competition and innovation.

To rectify its recent misstep, the FCC should reaffirm the reasoning motivating its initial regulatory action at the time of the AOL Time Warner merger, which found interoperability among all providers to be the key to a robustly competitive IM industry. The FCC should mandate interoperability among all IM providers based on publicly available standards such as those currently emerging from the Internet Engineering Task Force (IETF).[104] In so doing, the FCC would

104. As the rest of this Part will seek to make clear, the innovation spurring nature of an open-standards-based regime, in addition to its relative administrative feasibility from the standpoint of a government agency like the FCC, makes open-standards-based interoperability a more viable choice for IM than an interconnection requirement based on reasonable, nondiscriminatory licensing of proprietary standards. This latter method of achieving interoperability has been mentioned previously in this paper, and was one of the options available to Time Warner pursuant to the original Condition. However, for reasons I hope will become apparent, achieving IM interoperability via open standards is a more practical approach, one that, significantly, more closely mirrors the interoperability paradigm that made the Web such an important economic and social phenomenon. That said the myriad details and potential efficacy of an interoperability regime for IM based on

transform the IM platform into an innovation commons wherein any interested party could create new IM products and services and build markets for them based solely on the appeal of the products and services to consumers, rather than on the relative size of an oligopolist's closed, proprietary network.

A. The FCC's Jurisdiction to Mandate Interoperability for IM Providers

A threshold question is whether the FCC has the authority to impose such an interoperability mandate outside the context of a merger-specific review. Because the FCC imposed the Condition as part of a merger review involving the transfer of broadcasting licenses, the authority for conditioning approval of the merger on compliance with the Condition stemmed from specific statutory provisions dealing with such transfers.[105] As a result, the merger review proceedings did not directly implicate the more expansive jurisdictional issue presented by a suggestion that the FCC mandate industry-wide interoperability Perhaps laying the groundwork for a future rulemaking proceeding, the Merger Order included an explanation of the FCC's authority to regulate IM, irrespective of any merger-specific review.

The FCC located its authority to regulate IM in "at least three sections of the Communications Act."[106] Notably, section 2 of the Act grants the FCC "jurisdiction over 'all interstate . . . communication by wire or radio' and 'all persons engaged within the United States in such communication . . . .'"[107] In addition, section 3 defines these forms of communication as "including 'the transmission . . . of writing, signs, signals, pictures and sounds of all kinds . . . including all instrumentalities, facilities, apparatus, and services (among other things, the receipt, forwarding, and delivery of communications) incidental to such transmission.'"[108] The FCC reasoned that IM falls "well within

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reasonable, nondiscriminatory licenses instead of open standards are outside the scope of this Comment. *See supra* note 41, for more on the distinction.

105. Merger Order, *supra* note 4, ¶ 147. Even if the FCC acted with ulterior motives when it imposed the Condition, the authority for imposing the Condition nonetheless derived from the merger-specific context. In the case of the mandated industry-wide interoperability argued for in this Comment, it is necessary to establish the FCC's authority for such a rulemaking. *See* discussion *supra* notes 51-62 and accompanying text.

106. Merger Order, *supra* note 4, ¶ 148. *See* Communications Act of 1934, 47 U.S.C. §§ 151-614 (2002).

107. Merger Order, *supra* note 4, ¶ 148.

108. *Id.*

Section 3's definitions" and that as a result, it had jurisdiction to regulate IM.[109]

The United States Supreme Court has stated that the FCC's jurisdiction is "not limited to any particular technology," and that "new communications technologies fall within the FCC's 'ancillary jurisdiction.'"[110] Though at least one commentator has suggested that the Merger Order failed to establish sufficiently the appropriate grounds for FCC regulation of this area,[111] others have agreed with the FCC that it "almost certainly" has the authority to impose such requirements "under the relevant statutes."[112] Among those agreeing with the FCC's jurisdictional analysis was Commissioner Powell, who grudgingly accepted the legal reasoning supporting the FCC's jurisdiction over Internet applications like IM.[113]

Additional support for the FCC's authority to regulate Internet applications like IM comes from the theory that the common carrier rules traditionally applied in the United States to the transportation and communication industries have applicability to the Internet.[114] From railroad tracks to telephone lines, government mandated interconnection based on the premise that the industry in question significantly implicates the "public interest" has a long pedigree in the United States.[115] Chief among these rules is an interconnection

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109. *Id.*

110. PETER W. HUBER, MARTIN K. KELLOGG & JOHN THORNE, FEDERAL TELECOMMUNICATIONS LAW § 3.3.1 (2d ed. 1999) (quoting United States v. S.W. Cable Co., 392 U.S. 157, 172, 178 (1968)).

111. Weiser, *Internet Governance*, *supra* note 3, at 843 n.109.

112. Speta, *supra* note 4, at 247.

113. Merger Order: Powell Statement, *supra* note 31, 6712 (stating that Title I of the Communications Act "does give this agency very broad authority over communications services, which easily encompasses much of the activity that takes place on the Internet," but that the "fact that we have always had Title I authority has not meant it was prudent to exercise it").

114. Speta, *supra* note 4, at 227-28 (introducing common carrier rules and suggesting relevance to Internet regulation).

> Common carrier duties have been imposed variously upon theories of de facto and de jure monopoly, on the theory that the enterprise had become "essential," and upon theories that the enterprise was publicly concerned in a particular manner . . . . [M]any of these factors exist in the current Internet and may therefore support the application of common carrier-type rules to Internet carriers."

Id. at 252

115. *Id.* at 258-59 "The first great federal legislation imposing common carrier duties was . . . the Interstate Commerce Act of 1887 . . . similarly based both upon strictly economic concerns over the abuse of monopoly power and upon less strict economic notions that the railroads had a *duty to serve the public interest*." *Id.* (emphasis added). "The history of

requirement that allows smaller companies in a market to connect to the established customer base of the market leader(s).[116] Particularly in communications markets, upstart firms would have no chance of success in the absence of such a requirement.[117] This is why communications law "has always included interconnection requirements."[118]

The Internet shares some of the key characteristics that tend to be identified with industries subject to common carrier regulation.[119] One critical similarity is the "manner in which the Internet has become an essential aspect of commerce and communication for many people and industries."[120] IM's potential to serve as a fundamental platform for future Internet applications strongly suggests that the imposition of common carrier rules would be in the public interest and in accordance with regulatory precedent.[121]

B. Major Issues of Mandated Interoperability

The Removal Order fails to address concerns raised in the Merger Order about the need for an open IM marketplace to spur innovation and improve consumer welfare. While the FCC failed to address in any substantive fashion the issues surrounding the possible adoption of a publicly available standard, AOL did address these issues in its Petition for Relief, painting a gloomy picture of the problems that would be caused by mandated interoperability. Specifically, AOL offered a list of "potentially large and serious"[122] social costs of interoperability as part of the affidavit of an economics professor, and former FCC Chief Economist, named William Rogerson.

The potential costs presented in AOL's Petition are likely to be the sort of arguments that would be hashed out in any FCC rulemaking regarding mandated interoperability of IM providers; as such, they provide a glimpse into the issues on which any such proceeding might turn. For each of the purported problems of interoperability raised in

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common carrier regulation of telephone companies demonstrates a similar . . . concern . . . declaring telephony to be a public enterprise." *Id.* at 261.

116. Speta, *supra* note 4, at 251.

117. *Id.*

118. *Id.*

119. *Id.* at 269.

120. *Id.*

121. Speta, *supra* note 4, at 278 ("The common carrier approach would . . . require [universal] access to the names and presence databases used in instant messaging, and it would require it now, not in the future after even more service depend on it.").

122. Petition for Relief, Rogerson Affidavit 1, *supra* note 22, at 17.

the AOL Petition, there is evidence tending to show that the would-be problem is either not a viable concern, or if it is, that it would exacerbated rather than mitigated by a failure to mandate interoperability.

In Professor Rogerson's first affidavit, AOL offered reasons not only why the Condition should be lifted but also why, as a general matter, "imposing compatibility conditions on... competitive network industries" like IM is "likely to impose social costs even though it generates no social benefits."[123] AOL's analysis foreshadows a time when AOL might have to argue that interoperability is undesirable, even if AOL's competitors are also being required to interoperate.

1. Effect of Open Standards on Innovation

The first concern raised by AOL is that the standard setting required by mandated interoperability would limit firms' ability to design their IM systems as they see fit.[124] This contention is contradicted by the well-documented history of the Internet to date, throughout which agreed upon standards have served as the catalyst for unprecedented levels of innovation.[125] As Faulhaber and Farber indicated in the Comments in Reply to AOL's Petition for Relief, "the overwhelming evidence... suggests that open standards foster innovation, not hinder it." [126]

Significant in this regard is evidence tending to show that smaller companies are more effective innovators than bigger companies.[127] Economic researchers have concluded, "technological progress thrives best in an environment that nurtures a diversity of sizes and, perhaps, especially, that keeps barriers to entry by technologically innovative newcomers low."[128] The most effective way to keep the barriers to entry low enough to allow small, innovative companies to participate in the

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123. *Id.* at 14.

124. "[M]andated interoperability will require some form of standard setting... [that] will limit firms' design choices for the nature of their own systems." *Id.* at 17

125. *See supra* notes 5-10 and accompanying text.

126. "The use of standards on the Internet has unleashed an unprecedented torrent of innovation, based on basic agreed-upon standards. Far from constraining firms, it has been tremendously liberating to have simple open standards that firms can design to." Faulhaber Comments, *supra* note 73. *See also* Oxman, *supra* note 10, at 5 ("[T]he growth and continued success of the Internet... can be attributed to one basic attribute: the openness of both the Internet and the underlying telecommunications infrastructure.").

127. Weiser, *Innovation*, *supra* note 76, at 579-80 (stating "smaller firms tend to be more efficient, productive, and aggressive about pursuing innovation").

128. *Id.* at 580 (quoting F.M. SCHERER & DAVID ROSS, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 660 (3d. ed. 1990)).

market is to mandate that firms design their systems around open standards.[129]

Moreover, the often-commented-upon lack of meaningful innovation by the three oligopolists is further evidence of the way in which the *absence* of an open standard has curtailed innovation in IM services. One commentator has opined that the major IM services are "frozen in time,"[130] while Faulhaber noted that "[t]he feature sets of AOL, Microsoft, Yahoo and other IM services differ only minimally," and that "IM appears to be a market in which product differentiation does not play a significant role."[131]

In its Petition, AOL states that IM "has not become, as some had predicted, the platform through which all future Internet services will be delivered."[132] While AOL's intent in making this observation likely was to weaken the FCC's rationale for regulating the IM market, the comment is perhaps unintentionally illustrative of the negative impact closed standards can have on innovation in a network industry like IM. If smaller companies are more likely to introduce significant innovations into the marketplace, then the extent to which such companies can successfully enter the market will be an important variable in determining whether any progress is made toward the goal of evolving IM into a bona fide platform for expansive real-time computing.[133] Hence, when network effects, closed standards, and incompatibility serve to exclude likely innovators from the market, we would expect to see precisely the sort of product stagnation and stalled platform

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129. *Id.* at 582 (stating "an important role for regulation is to 'keep entry open so that challengers with new ideas can force the pace of innovation'") (quoting F.M. Scherer, *Antitrust, Efficiency, and Progress*, 62 N.Y.U. L. REV. 998, 1014 (1987)).

130. Lee Finck, *Instant Messaging's Dead End*, CNET News.com (Sept. 12 2002), *at* http://news.com.com/2010-1071-957551.html ("While this battling over interoperable messaging is being waged, instant messaging products have barely advanced. They look, feel and taste about the same as they did in the beginning."); *see also* Ryan Naraine, *Has IM Innovation Peaked?*, Instant Messaging Planet (May 7, 2004), *at* http://www.instantmessagingplanet.com/public/article.php/3352161 (opining that despite new product upgrades, there is "a lingering—and legitimate—worry that IM innovation has peaked, especially on the consumer side").

131. Faulhaber, *Network Effects, supra* note 12, at 315.

132. Petition for Relief, *supra* note 90, at 3-4.

133. "By adopting an open standard, an industry places a key value proposition—the underlying platform—outside of proprietary ownership and thus facilitates the broad adoption of the standard." Weiser, *Internet Governance, supra* note 3, at 830. This standard-setting is critical to consumer welfare and long-term innovation because "an individual company will often see sticking with a proprietary standard as in its best interest" even though "the Internet community as a whole will sometimes be better off with open, interoperable standards." *Id.*

development that has characterized the consumer IM market in the years since the imposition of the Condition. The oligopolists are furthering their corporate interests at the expense of broad-based innovation; they have effectively placed a chokehold on the development of the IM platform. In extreme cases, economists have found that this chokehold effect can result not only in the retarded growth and progress of a developing platform but also in its eventual demise.[134] Ultimately, although "[t]he right choice between open and closed standards is a complex one," if the "most important consideration is getting everyone speaking the same language, there are good reasons to think that open systems have a natural advantage."[135]

It seems straightforward to propose that getting everyone to speak the same language is a very important consideration in the context of the consumer welfare of IM users and the long-term viability and evolution of the IM platform; yet critics of open IM standards have managed to find a way to disagree. In his second AOL affidavit, presented as part of AOL's reply to the public comments filed in response to its Petition, Professor Rogerson stated that it should not come as a surprise that IM operators do not interoperate. There are many examples of "competitive markets where there are network effects but not all firms choose to be completely compatible with all other firms, and *government does not pass regulations mandating compatibility.*"[136] Among the examples offered by Rogerson are video game systems ("the same software cannot be used on multiple systems") and memory for digital cameras ("different manufacturers use . . . incompatible, data storage methods").[137]

These examples come off somewhat unconvincingly in the context of IM. While the markets Rogerson discusses do exhibit network effects generally, they exhibit a different kind of network effect than IM.

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134. *See* Neil Gandal, *Compatibility, Standardization, and Network Effects: Some Policy Implications*, 18 OXFORD REV. ECON. POL'Y 80, 84 n.16 (2002) (recounting the ultimate failure of the audio technology of quadraphonic sound, for which two standards were available, neither of which was fully embraced by consumers because of concerns over incompatibility).

135. Mark A. Lemley, *Standardizing Government Standard-Setting Policy for Electronic Commerce*, 14 BERKELEY TECH L.J. 745, 756 (1999).

136. Affidavit of Professor William P. Rogerson, Reply Comments of AOL Time Warner, Inc., at 7 n.3 (May 20, 2003), *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner, Inc., Transferee*, FCC CS Docket No. 00-30, 16 F.C.C.R. 6547 (2001) [hereinafter AOL Reply Comments, Rogerson Affidavit 2] (emphasis added).

137. *Id.*

Rogerson's examples of video game systems, computer software applications, and data-storage devices for digital cameras are not *direct* network effect industries like telephones and IM but *indirect* network effect industries.[138] The same direct network effects that appear in the telephone system are prevalent on the Internet, especially when the Internet use at issue concerns interpersonal communication.[139] As long as common standards prevail on the Internet, the value for each user will increase as each additional user comes online.[140] In contrast, the examples offered by Rogerson are markets in which the absence of complete compatibility does not pose the same problems for network participants.[141] As a result, to conclude that IM does not need a common standard because memory chips for digital cameras do not is to misapply network effects theory. Consumer welfare simply is not affected in the same way. Put another way, this difference is the reason why telephone companies are common carriers with a federal agency to regulate them and video game manufacturers are not.

2. Standard-Setting: the Logistics of a Mandated Interoperability Regime

The second potential cost of mandating a common standard raised in AOL's Petition for Relief is that "a full-blown mandated interoperability regime is likely to be complex and expensive to run."[142] The progress of the IETF toward setting workable IM standards and the demonstrated technical feasibility of IM interoperability, cast doubt on

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138. The classic example of a direct network effect is the telephone system; with direct network effects, an "increase[] in the number of consumers on the same network raises the . . . benefits for everyone on the network." Gandal, *supra* note 134, at 80. Indirect, or virtual, network effects are well illustrated by the consumer electronics industry, where an "increase[] in the number of users of compatible hardware increases the demand for compatible software and hence the supply of software varieties." *Id.*

139. "The fact that value to consumers is so heavily dependent on adoption by others makes the Internet a rare example of the [direct] form of network [effect]." Mark A. Lemley, *Antitrust and the Internet Standardization Problem*, 28 CONN. L. REV. 1041, 1045 (1996) [hereinafter Lemley, *Antitrust*]. Because of the direct, or strong, network effect, the "optimal number" of telephone networks or Internets is one. *See id.* "While the desirability of a unified network may seem obvious, it is a fact which distinguishes the Internet (and the telephone network) from most consumer products. No one would seriously argue, for example, that the optimal number of types of furniture or food was one." *Id.* at 1045-46.

140. Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479, 488-89 (1998).

141. "Unlike telephones and fax machines, an operating system or application program will allow even a single user to perform a variety of tasks regardless whether even a single other consumer owns the software." *Id.* at 491.

142. Petition for Relief, Rogerson Affidavit 1, *supra* note 22, at 17.

AOL's position that the process of producing and adhering to standards would be unduly complex and expensive.

Generally, there are three ways for standards to come into existence: market competition, mandated standards set by regulators, and standard-setting organizations.[143] When standards are set by market competition, they tend to be proprietary.[144] The incompatible proprietary IM standards maintained by AOL, Microsoft, and Yahoo! are examples of standards set by market forces. As we have seen in the context of IM, "competition between potential standards [has] troubling economic effects," including the potential for market tipping and the erection of barriers to entry for would-be innovators.[145] There is also demonstrated potential for problems with standards set by government regulators, including the possibility that government standard-setters will not have access to the best information about industry developments and will as a result choose objectively poor standards that might "prove durable even when they are demonstrably ill-conceived."[146]

Compared to near-monopolistic or oligopolistic markets and inefficient government-set standards, a "more palatable approach to achieving interoperable standards" is the adoption of standards set by a private standard-setting organization.[147] The IETF is "the most important Internet standards body," and has been responsible for the development of key standards that "helped drive the development of new applications and encourage the increased usage of the Internet."[148] In the past, however, the adoption of IETF standards has been a voluntary process.[149] As the Internet has shifted in the past decade from "a public commons to a growing private marketplace," more companies have pursued the development of their own proprietary standards, making it increasingly difficult for open standards like those set by the IETF to become the primary protocols for emerging platforms through the traditional method of voluntary adoption.[150]

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143. Gandal, *supra* note 134, at 83-84.

144. *Id.*

145. Lemley, *Antitrust*, *supra* note 139, at 1059.

146. *Id.* at 1063 and n.77 (offering the government-mandated standard for HDTV as an example).

147. *Id* at 1064.

148. Weiser, *Internet Governance*, *supra* note 3, at 826 & n.28 (discussing the role of the IETF in the development of such critical open Internet standards as TCP/IP and HTML).

149. Reply to Comments, Rogerson Affidavit 2, *supra* note 136, at 10-11 (questioning whether mandated adoption of this type of standard is a feasible solution); *see also* Weiser, *Internet Governance*, *supra* note 3, at 826-27 (recounting how "developers would work with one another and rely on open standards rather than compete with one another to establish

The current state of the IM market exemplifies this shift and illustrates the need for a definitive move by the FCC to craft a regulatory policy that rectifies the problems in the marketplace while avoiding the pitfalls inherent in certain types of standard-setting processes. Market forces have created an oligopoly lacking in meaningful innovation and have restricted free entry into the marketplace. Past experience with standards set directly by the government all but eliminates government-chosen standards as a viable option for fostering innovation and competition. At the same time, the traditional IETF model for standard setting, that is, voluntary adoption of IETF-established standards, has failed to take hold in the consumer IM marketplace, where closed, proprietary standards unquestionably rule the day.

The solution to this seemingly intractable problem is precisely the type of regulation reflected in the now-removed Condition—a government mandate that companies adopt privately set standards. This model has been termed "audited self-regulation."[151] In the context of the FCC and IM, this approach would suggest that the role for the FCC is to "articulate an output-based goal, such as interconnection between different services, and leave the matter to a private body to develop the appropriate technical resolution."[152] Because of the IETF's track record in setting key Internet standards and progress toward the development of open protocols for IM systems, the FCC should continue to mandate adoption of an IETF standard as it did when imposing the Condition.[153]

As of this writing, two major IM standards are nearing approval by the IETF.[154] The two standards are as SIMPLE and XMPP.[155] As part of

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the basic architecture that supports the Internet").

150. Weiser, *Internet Governance*, *supra* note 3, at 830. "As the stakeholders in the future of the Internet become more diverse and more concerned with the impact of the Internet's development on their profits, stable, open . . . standards may well become the exception, not the norm." *Id.* at 831.

151. *Id.* at 842 (quoting Douglas C. Michael, *Federal Agency Use of Audited Self-Regulation as a Regulatory Technique*, 47 ADMIN. L. REV. 171, 203-40 (1995)).

152. *Id.* (praising the original FCC Condition for relying on and empowering private standards-setting committees as a workable solution for regulating platforms like IM).

153. Despite the fact that the "stakeholders in the Internet's development and participants in standard-setting committees have become more diverse and focused on profits," committees like the IETF "still can provide a forum for negotiating between different proprietary interests and developing common standards that will benefit the entire community." Weiser, *Innovation*, *supra* note 76, at 573-74.

154. *See* Nasaw, *supra* note 2.

155. *See* Cathleen Moore, *Messaging Convergence XMPP Challenges SIMPLE as Dominant IM and Presence Standard*, INFOWORLD, April 21, 2003, *available at*

deals with enterprise (or corporate) IM provider Reuters (discussed further below), both AOL and Microsoft have demonstrated a willingness and an ability to work with SIMPLE in connection with their consumer IM offerings, in exchange for undisclosed sums paid by Reuters.[156] In connection with its own enterprise-oriented business, Microsoft has already committed itself to be compliant with the SIMPLE standard, as has IBM.[157] On the other hand, the XMPP standard comes from the open-source movement and has been called the "Linux of IM."[158] XMPP is supported by companies ranging from Intel to Sony.[159]

While opponents of government regulation might argue that this voluntary standard-setting activity is proof that the market can regulate

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http://www.infoworld.com/article/03/04/18/16imstandards_1.html. XMPP refers to "eXtensible Messaging and Presence Protocol" and SIMPLE, "SIP for Instant Messaging and Presence Leveraging Extensions" (where SIP stands for "Session Initiation Protocol"). *Id.* The IETF has Web pages for the working group dedicated to implementing the standards of each protocol. *See* http://www.ietf.org/html.charters/simple-charter.html (presenting SIMPLE standards); http://www.ietf.org/html.charters/OLD/xmpp-charter.html (presenting XMPP standards) (last viewed Oct. 10, 2004).

156. Christopher Saunders, *AOL, Reuters Strike IM Compatibility Deal*, Instant Messaging Planet (Sept. 9, 2003), *at* http://www.instantmessagingplanet.com/enterprise/article.php/3074601 (describing "translation" of AOL's protocols into Reuters' SIMPLE-based protocols); Christopher Saunders, *MSN Next to Hook Up With Reuters*, Instant Messaging Planet (Sept. 29, 2003), *at* http://www.instantmessagingplanet.com/enterprise/article.php/3084891 (describing Microsoft deal as "similar to" AOL deal). Significantly, these deals involve private firms paying each other undisclosed amounts for their compliance and do not represent a general commitment from the dominant IM providers to abide by open standards. Moreover, because the deals involve AOL and Microsoft modifying their IM networks only for the users of Reuters' expensive corporate IM software, the overwhelming majority of IM users do not benefit from these experiments in IETF-standard compatibility.

157. Moore, *supra* note 155.

158. *Id.* "Open source" refers to "open source software," of which the operating system known as Linux is perhaps the classic example. Open source software is similar both practically and philosophically to the paradigm of open standards discussed in this Comment. With open source software, the source code of the software, which is essentially the set of computer-language instructions that creates a given piece of software and defines its features and functionality, is freely available to the public. This allows an individual user to make changes to the source code and thereby adapt the software to his needs. Microsoft's dominant Windows operating system is the paradigmatic example of non-open-source, or closed, software, the source code of which is a closely guarded trade secret. An exploration of the open source movement and its connection to the idea of open standards for IM is beyond the scope of this Comment. *See generally* LESSIG, *supra* note 8, at 149-72; Weiser, *Information Platforms*, *supra* note 41, at 22-31 (discussing history of open source software and related issues including effect on innovation). *See also* Jabber (Web site of open source IM developer), *at* http://www.jabber.org (last visited Jan. 31, 2005).

159. Moore, *supra* note 155.

itself, the presence of two competing open standards poses a significant hurdle to total interoperability. There is confusion in the marketplace in the face of these competing open standards, particularly given the uncertainty of what AOL, Microsoft, and Yahoo! will do to embrace the developing standards.[160] Such confusion is limiting investment in the IM market because cautious companies are waiting for a dominant standard to emerge for fear of committing their resources to a standard that might become outdated.[161]

The question of which standard to adopt, however, is much more of a consensus issue than a technical one.[162] The IETF cannot force companies to implement its standards; rather it "adopts standards for which there is an effective consensus."[163] One industry expert has predicted that the industry might eventually adopt a standard that blends both SIMPLE and XMPP,[164] though the question still remains how (and when) such a best-of-both-worlds standard will emerge from the IETF. One possible answer lies in the type of audited self-regulation proposed above: a FCC mandate that IM providers adopt publicly available standards. The regulatory push of mandated interoperability is precisely the impetus needed to align the standard-setting efforts of the IETF and the IM marketplace as a whole toward the goal of total interoperability.[165]

As stated previously, there is a wealth of evidence showing that interoperability is technically quite achievable including recent deals announced by AOL and its competitors; "self-help" actions taken by various IM companies over the years; and reports submitted to the FCC by AOL during the time the Condition was in effect. All this evidence underscores the reality that full-blown interoperability has failed to materialize less for technical reasons than for strategic, profit-oriented ones.[166]

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160. *See* Nasaw, *supra* note 2.

161. *Id.*

162. Faulhaber, *Network Effects*, *supra* note 12, at 323.

163. *Id.*

164. Moore, *supra* note 155.

165. With standards setting bodies like the IETF their "lack of formal legal authority underscores why they are best seen as a tool for implementing government policy and not a substitute for government policymaking." Weiser, *Innovation*, *supra* note 76, at 595.

166. *See supra* notes 12-13 and accompanying text for the technical definition of interoperability and comments made by FCC technologists at the time of the merger to the effect that IM interoperability was technically relatively straightforward.

In September 2003, AOL announced a deal, mentioned above, through which it would pursue server-to-server interoperability with the IM product offered by Reuters (used primarily by business enterprises). The deal signaled that achieving server-to-server interoperability was a realistic goal; moreover, the technical details of the interconnection to be fostered by the deal are damaging to any argument by AOL that it would be difficult to work within the framework of IETF-approved standards. This is because the Reuters IM system employs the SIMPLE protocol.[167] Later the same month, Microsoft announced a similar deal with Reuters, providing further evidence that building technical bridges between the proprietary systems of the oligopolists and systems incorporating IETF standards is eminently feasible from a technical standpoint.[168]

This technical feasibility actually has been apparent for quite a while, preceding the imposition of the Condition. In the pre-Condition era, competitors to AOL's IM services regularly employed self-help measures to connect their IM systems to those of AOL.[169] AOL routinely blocked these connections, which would often result in connections being re-forged and re-blocked. The history of these self-help measures plainly reveals that AOL's competitors were able on a regular basis to achieve interoperability without any cooperation from AOL.[170]

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167. *See* Saunders, *AOL, Reuters Strike IM Compatibility Deal*, *supra* note 156 (noting the negative implications this deal could have on AOL's long-held, intransigent position on the feasibility of server-to-server interoperability, "now that compatibility with SIMPLE . . . has been proven").

168. Saunders, *MSN Next to Hook Up With Reuters*, *supra* note 156. A more dramatic piece of evidence that interconnection is technically achievable came in the summer of 2004, when Microsoft announced that a future version of its enterprise version of IM would interoperate with the networks of AOL and Yahoo!. *See* Jim Hu & David Becker, *IM Giants Drop Some Barriers to Peace*, CNET News.com (July 15, 2004), *at* http://news.com.com/2100-1032-5270067.html. It is critical to point out that such interoperability—if it comes to pass—will only be available to Microsoft's paying corporate customers and will do nothing to alleviate the incompatibility that stymies consumer users of the major IM networks, who comprise the overwhelming majority of all IM users. *Id.* *See also supra* note 150 and accompanying text.

169. Merger Order, *supra* note 4, ¶ 168.

170. Interestingly enough, the blocking battles started up again in the wake of the FCC's decision to remove the Condition. Microsoft and Yahoo!, though they had traditionally allowed third-party IM providers to employ self-help connection measures, both had begun blocking such efforts within a month of the Condition's removal. *See supra* notes 77-81 and accompanying text. Still, the result of blocking invariably seems to be persistent reconnection on the part of the upstarts. *See* Jim Hu, *Trillian Reconnects with Yahoo*, CNET News.com (Sept. 29, 2003), *at* http://news.com.com/2100-1032_3-5083623.html. The passage of time has done nothing to diminish the ever present tension between the major networks and the third-

Further confirmation that interoperability has long been technically feasible comes from reports submitted by AOL to the FCC during the time the Condition was in place.[171] In its Second Progress Report on Instant Messaging Interoperability, AOL described the results of interoperability tests it conducted between its IM system and that of another company, Lotus, using a server-to-server protocol based on the then-current version of the IETF's SIMPLE protocol.[172] The test confirmed that instant messages and presence information could be exchanged between two different IM services.[173]

3. Effect of Open Standards on Incentives to Innovate and Invest in IM

The third major concern raised by AOL, and the most significant according to former FCC Chief Economist Rogerson, is that investment incentives will be reduced by open standards because companies will have to share the benefits of their innovations with competitors to preserve interoperability.[174] Basically, the contention is that firms would cease to innovate in an interoperable market because "to the extent that an innovator has to make parts of the innovation available to all firms in order to preserve interoperability, customers will be able to take advantage of the innovation without switching to the innovator."[175]

The first problem with this prediction is that AOL offered no evidence that the types of innovations firms would be making in the IM marketplace necessarily need to be made available to competitors to

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party providers who must be able to connect with them in order to survive. *See* Michael Hall, *Yahoo Protocol Change Blocks Third Party Clients*, Instant Messaging Planet (June 24, 2004)(describing a renewed effort on the part of Yahoo! to block third-party providers from connecting to its IM network) *at* http://www.instantmessagingplanet.com/public/article.php/3373211

171. As part of the Condition, the merged company was required to file a progress report with the FCC every 180 days, "describing in technical depth[] the actions it has taken to achieve interoperability of its IM offerings." Merger Order, *supra* note 4, ¶ 197.

172. Second Progress Report on Instant Messaging Interoperability, at 5-7 (January 17, 2002), *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner, Inc., Transferee*, FCC CS Docket No. 00-30, 16 F.C.C.R. 6547 (2001) [hereinafter Second Progress Report].

173. *Id.* at 6.

174. AOL Reply Comments, Rogerson Affidavit 2, *supra* note 136, at 10 ("Once a firm agrees to various standards that permit interoperability, it is highly likely that the firm will no longer be able to appropriate as large as share of the gains from any innovation that it introduces.").

175. *Id.* at 11.

preserve interoperability. If innovations could be introduced that did not need to be shared with competitors, then the premise that users could access the innovations without switching to the innovator breaks down. There is evidence in AOL's progress reports to the FCC that such innovations not only are possible but also presently exist. In the progress report mentioned above, where AOL described a successful test of server-to-server interoperability, AOL noted that certain features of its IM service, including user-warnings, were not supported by the version of the SIMPLE protocol used in the test and hence could not be used when communicating with the users of a different network.[176] However, the use of these proprietary features by fellow AOL users within the AOL network was unaffected,[177] meaning that certain types of features can be unique to one company's offering *without disabling a basic level of interoperability* among systems.

Another example comes from the "as if" interoperability software, Trillian. Many of the features available as part of Trillian that enhance the IM experience have nothing to do with interoperability per se: message history, contact-organizing options, multiple-window-managing, and the availability of "skins" to customize the look and feel of the software.[178] This functionality relates to an individual user's experience with the instant messaging software and has nothing to do with the information sent or received by that user, either in the form of an actual message or presence information about that user's status sent automatically by the software.[179] Because Trillian's entire purpose is to serve as an alternate method for accessing IM accounts that users already maintain with other providers (each of which has its own software), Trillian's very existence—not to mention popularity[180] —is proof of the fallacy contained in the argument that innovations would need to be shared with all providers to preserve interoperability. The

176. Second Progress Report, *supra* note 172, at 4 n.6.

177. *Id.* at 3-4 (noting that the test was designed to facilitate basic interoperability "while at the same time maintaining the integrity of [AOL's] privacy and security features . . . at least within AOL's IM network").

178. *See Trillian: Your Freedom to Chat*, *supra* note 84.

179. By way of illustration: Ask yourself if your choice of e-mail software—which might be based on the way the software handles your contacts or allows you to organize folders of messages, or which you might "choose" by default based on whatever came loaded on your computer—has any impact on your ability to exchange e-mails with whomever you wish. The ultimate point of this Comment's argument is that there is no reason for IM to be any different.

180. *See Trillian: Your Freedom to Chat, supra* note 84 (reporting over 10 million downloads).

millions of Trillian users choose the software because it offers desirable features that the other IM clients do not, without sacrificing basic connectivity. If Trillian had to share all of its innovations with other IM providers, it simply would not exist.

The second problem with AOL's concern over open standards is that AOL does not address the possibility that the amount of investment potentially being kept out of the IM market as a result of the closed-access paradigm exceeds the amount expected to be invested by the oligopolists to continue improving their offerings. If this were the case, investment in the IM market as a whole would be likely to increase, not decrease, by the adoption of open standards.

Interoperability would not dampen investment incentives when seen from the point of view of companies like Trillian's producer, Cerulean Studios; far from it. If any company that wanted to, could produce IM products and services knowing that the entire IM universe would always be accessible to its users, there would be less uncertainty in the market and more of a sense that IM was a level playing field where the best and most desirable features and applications would win out.[181] This would likely stimulate investment incentives, not dampen them. Presently, the oligopolists do not need to be as concerned about having the same level of functionality as, say, Trillian because they can choose to shut Trillian users out of their networks as they deem necessary, which serves to limit the ultimate market for products such as Trillian and hence the potential investment in such products.

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181. One possible result of the mandated interoperability advocated by this Comment is that the oligopolists would attempt to use intellectual property rights as a defense to any standardization process that opens up access to their networks. *See* Weiser, *Information Platforms*, *supra* note 41, at 7. ("[I]n the event that AOL could not prevent a software program from facilitating interoperability, it may well test its IP rights as a means of defeating interoperability."). Both AOL and Microsoft have received patents on various elements of their IM systems, see for example Christopher Saunders, *Much Ado about IM Patents* (Oct. 8, 2003), Instant Messaging Planet, *at* http://www.instantmessagingplanet.com/public/article .php/3089321; Christopher Saunders, *AOL Lands New Patent, Beefs Up IM in '8.0 Plus'*, Instant Messaging Planet (Apr. 1, 2003), *at* http://www.instantmessagingplanet.com/ public/article.php/2173701; Jim Hu, *Patent Creates IM Wrinkle*, CNET News.com (Dec. 17, 2002), *at* http://news.com.com/2100-1023-978234.html. The prevailing wisdom is that an IP-rights-based assault on interoperability, while a possibility, is unlikely, and that these patents are perhaps being amassed to lay the foundation for a strong defense against any infringement claims directed at the market leaders. *See, e.g.*, Saunders, *Much Ado About IM Patents* (Oct. 8, 2003), *at* http://www.aspnews.com/news/article.php/3089321. An analysis of the intersection between IP rights and the telecommunication regulation of the Internet is beyond the scope of this Comment. Nonetheless, the intersection is an important component of the larger story, and represents an active research area, one with important implications for the future of the Internet. *See generally* Weiser, *Innovation*, *supra* note 76.

In Comments filed in reply to AOL's Petition, BellSouth expressed a similar belief that a lack of interoperability negatively affects investment and innovation.[182] BellSouth offered an instructive example of the type of investment likely being kept out of the IM market because of closed standards, that of a bank seeking to provide various kinds of account-related alerts to its customers via IM. According to BellSouth, in the absence of interoperability such a bank would have to "negotiate and build separate ... methods to reach each IM provider's users, and a dominant IM provider ... would be in a position to negotiate any anti-competitive or financially attractive terms that they desired."[183]

BellSouth's contention that a significant amount of potential investment is kept out of the IM market because of proprietary standards finds support in the majority opinion in the FCC's Merger Order. The majority rejected AOL's argument that any company with a significant customer list could effectively compete in the IM market.[184] Far from being able to effectively compete, the majority suggested, even such prominent firms as Sears, American Express, Amazon and eBay—all of whom might have viable IM-based applications to offer their customers—would need to undertake Herculean efforts to even stand a chance of taking market share away from dominant firms like AOL.[185]

Ultimately, the question becomes whether "firms in the future [will] be more or less likely to introduce new communications-type services knowing that the regulators ... may limit the scope of the resulting

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182. BellSouth Corp. Reply Comments, at 8 n.14 (May 20, 2003), *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner, Inc., Transferee*, FCC CS Docket No. 00-30, 16 F.C.C.R. 6547 (2001) [hereinafter BellSouth Comments] ("Innovation is fostered by allowing the widest audience to invest and benefit from a fair market share in an open market. Having a closed environment does not allow many potential product investments to be realized when the largest portions of the market are segmented and not accessible.").

183. *Id.*

184. Merger Order, *supra* note 4, ¶ 166.

185. The majority in the Merger Report wrote:

> Any of these would-be entrants would need to master a new business ... [and] would also need to launch a major marketing campaign to interest its customers in using its IM. The millions of those customers would need to ... download software ... pick an IM name and find their buddies in the same service. From the entrant's original customer list, tens of millions of customers would need to finish all these steps for the resulting [IM system] to rival AOL's. We find that there are few companies that could seriously attempt such entry, and that even they would find many obstacles to successful entry.

Id.

monopoly by requiring interconnection[.]"[186] To answer the question, using AOL as an example, we need to determine if "the fairly extensive period during which AOL was able to refuse interconnection with competitors" was sufficient for AOL to have "realized an above-normal return on its innovation investment."[187] If so, then "no chill on future innovation should occur."[188]

There is a strong argument that the popularity of IM, which has always been free to consumers, contributed to the rapid growth of AOL's customer base.[189] This growth has resulted in considerable advertising and Internet service provider revenue to AOL.[190] Microsoft and Yahoo! also carry advertising on their IM networks. As discussed above, these providers are now also entering revenue-generating deals with companies like Reuters, which are willing to pay for access to the users of the dominant networks. As BellSouth put it, these IM providers "are clearly not doing this simply out of the goodness of their hearts. Somebody is paying for this service."[191]

This balancing of investment incentives informed the FCC's decision to impose the Condition in 2001, representing as it did an implicit conclusion that AOL had reaped sufficient rewards from its IM innovation to justify agency action to insure that "temporary monopoly should not be used to foreclose new innovators."[192] Now, over two years later, IM is again deregulated, and all companies except those in the tight oligopoly remain effectively locked out of the massive consumer marketplace. Looking ahead, the FCC must ask itself whether providing additional return-on-investment to companies that have arguably already received enough to encourage innovation is worth "fenc[ing] off access to a commons" and thereby limiting rather then enhancing consumer welfare and investment incentives overall.[193]

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186. Faulhaber, *Access, supra* note 18, at 703.

187. *Id.*

188. *Id.*

189. *Id.*

190. BellSouth Comments, *supra* note 182, at 6.

191. *Id.* at 5.

192. Faulhaber, *Access, supra* note 18, at 707.

193. Weiser, *Internet Governance, supra* note 3, at 838 (quoting Lotus Dev. Corp. v. Borland Int'l, Inc., 49 F.3d 807, 821 (1st Cir. 1995) (Boudin, J., concurring), *aff'd by an equally divided Court*, 516 U.S. 233 (1996)).

VI. CONCLUSION

The FCC should commence forthwith a rulemaking proceeding with the express aim of mandating interoperability, based on publicly available IETF standards, for all IM providers. Such action would reanimate the regulatory efforts initiated by the FCC in 2001 as part of the AOL-Time Warner merger, efforts that were wrongly derailed by the FCC's 2003 decision to reverse course and deregulate a market lacking broad-based competition and innovation. The beneficiaries of mandated interoperability would be the hundreds of millions of consumers who are increasingly dependent on IM as a communications tool and the myriad companies that are presently locked out of the IM market because of a tight oligopoly and strong network effects.

MATTHEW A. GOLDBERG*

* B.A. with honors 1992, State University of New York at Binghamton; M.A. 1995, University of Massachusetts at Dartmouth; Candidate 2005, Lewis & Clark Law School. The author would like to thank Professor Lydia Pallas Loren and Professor Joseph S. Miller of Lewis & Clark Law School for their helpful comments.